

Claims 1-4 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for the reasons set forth in paragraph 9 of the Action. Applicants have canceled claims 1-4 and rewritten the same as new claims 14-18, taking into consideration the Examiner's comments. Therefore, it is respectfully submitted that claims 14-18 are fully definite under 35 U.S.C. § 112, second paragraph.

Claim 1 was rejected under 35 U.S.C. § 102 as being anticipated by Baird et al. or Casolari. Likewise, claims 1 and 2 were rejected as being anticipated by Sigerist. Claims 1-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bühler et al., taken together with Baird et al., Yamato, Casolari, and Sigerist. Inasmuch as claims 14-18 are directed to similar subject matter as rejected claims 1-4, these rejections are traversed.

Applicants' invention relates to a mold for manufacturing concrete moldings by machine and, in particular, to a form for manufacturing concrete paving stones. These molds and machines for manufacturing concrete form components are very specialized. As set forth in the Background of the Invention, uniform filling of prior art mold chambers is problematic, since concrete is pourable only to a limited extent and, thus, is unevenly distributed in the mold chambers. Consequently, the resultant concrete product has differing densities and/or heights. Applicants' invention overcomes the problems associated with prior art concrete molds by providing a mold where it is possible, using the same prior art filling method, to manufacture concrete moldings of highly uniform density, uniform height, and uniform surface texture. This is achieved by a mold having a bottom mold part with at least one mold chamber, a top mold part with a load plate, and at least one die, where there are as many dies as mold chambers. Each at least one die includes a die shank which is connected to the load plate, a pressure-exerting plate connected to the other side of the die shank, and means for moving the pressure-exerted plate

away from the top mold part into contact with concrete, wherein the pressure-exerting plate can be forced downward under the action of a pressure medium, and the means for moving includes stops which define the displacement range of the pressure-exerting plate.

In contrast to the claimed invention, the references cited in the Office Action, on the whole, do not relate to a form or mold for the machine production (manufacturing) of, for example, concrete paving stones. Specifically, Baird et al. is directed to a mold press force equalizer for use in an injection-molding machine for the production of plastic components, and comprises tool plates 62, 64 that move toward each other. This is directly opposite of the claimed invention where the pressure-exerting plate moves away from the top part of the mold. As shown in Figure 5 of Baird et al., an equalizer 40 includes a top plate 41 and a bottom plate 42 coupled to form a chamber or cavity 43. Chamber 43 is filled with a fluid, such as a hydraulic fluid or the like, through an opening 44. That is, Baird et al. discloses a tool plate supported opposite an elastic compensating element 40, which is supplied with a hydraulic fluid. Further, plates 41 and 42 are coupled together using a plurality of bolts. Thus, plates 41 and 42 of equalizer 40 move together. Nowhere does Baird et al. disclose a bottom mold with at least one mold chamber, a top mold part with a load plate, and at least one die where there is as many dies as mold chambers, as set forth in claim 14. Further, nowhere does Baird et al. disclose means for moving a pressure-exerting plate of the die away from the top mold part into contact with concrete, wherein the pressure-exerting plate can be forced downward under the action of a pressure medium and wherein the means for moving includes stops which define the displacement range of the pressure-exerting plate. Accordingly, Baird et al. cannot anticipate the claimed invention.

Casolari is directed to a floating plane for press punches. Like the force equalizer of Baird et al., screws 15 secure the punch 2 to a base 1. Nowhere does Casolari disclose means for moving a pressure-exerting plate away from a top mold part into contact with concrete, as recited in independent claim 14. Further, Casolari fails to disclose a die, including a die shank, a pressure-exerting plate, and means for moving the pressure-exerting plate away from the top mold part into contact with the concrete, which means includes stops which define the displacement range of the pressure-exerting plate. Accordingly, Casolari cannot anticipate the claimed invention.

Sigerist is directed to an overlay molding press for forming and pressing an overlay to an elongated workpiece 22. While the Action relies on Figs. 2 and 3 of Sigerist, it is respectfully submitted that Sigerist fails to disclose a bottom mold part with at least one mold chamber, a top mold part with a load plate, and at least one die where there are as many dies as mold chambers. Figures 2 and 3 of Sigerist show two jaw members 26, 28 and an elongate pad 114 which are pressed against a workpiece to provide an overlay thereon. This is not a mold for manufacturing concrete. Further, not only does Sigerist fail to disclose a die, it does not include a die shank which is connected to a load plate, a pressure-exerting plate connected to the other side of the die shank, and means for moving the pressure-exerting plate away from the top mold part into contact with concrete, as set forth in independent claim 14. The jaw members 26, 28 move toward elongate pad 114. Accordingly, Sigerist cannot anticipate the claimed invention.

The Action further relies on Bühler et al., taken together with Baird et al., Yamato, Casolari, and Sigerist. As the Action notes, Bühler et al. does not disclose "a pressure chamber— for exerting a pressure force on the bottom die of the top mold part." For this teaching, the Action relies on one of Baird et al., Yamato, Casolari, and Sigerist, as each of those references

allegedly teaches a press mold, including a pressure chamber for exerting a pressing force on a displaceable die part. As argued above, Baird et al., Casolari, and Sigerist fail to disclose, teach, or suggest a die, including a die shank connected to a load plate, a pressure-exerting plate connected to the other side of the die shank, and means for moving the pressure-exerting plate away from a top mold part into contact with concrete, where the pressure-exerting plate can be forced downward under the action of a pressure medium, and the means for moving the pressure-exerting plate includes stops which define the displacement range of the pressure-exerting plate. Yamoto is directed to a uniform-press apparatus that is similar to the prior art of Baird et al., and thus does not disclose or teach the features missing from the above references.

Moreover, one of ordinary skill in the art would not have considered the technologically different disclosures of Baird et al., Yamato, Casolari, and Sigerist to modify Bühler et al. Bühler et al. also is not directed to a mold for manufacturing concrete moldings. Accordingly, it is respectfully submitted that it would not have been obvious to combine the applied references. Even if the references were combined, the claimed mold for manufacturing concrete moldings would not result.

Contrary to the applied references, the claimed invention relates to a mold having a special design of a stamping device, e.g., as shown in Fig. 1 of the instant application. The claimed mold with a stamping device is not designed as a rigid element, together with attached pressure plates, as shown in the applied references, but as a flexible element. As set forth on page 7, lines 19 of the instant specification, the mold is "filled" with concrete in the conventional manner and then compacting of the filled concrete occurs. For this to be achieved, the dies are subjected to a pressure medium (compressed air) and the pressure-exerting plate moves away from the top mold part. None of the cited references relates to such a "stamping device." Rather,

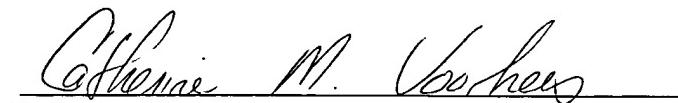
the applied references are directed to standard presses with respectively provided compensation pads.

As mentioned in the description of the instant application, concrete elements with high-grade and uniform density, uniform height, and uniform surface structure can be manufactured with the present invention. According to the invention, the mobility or pivoting ability of the upper mold part can be changed as a result of the pressure pad by changing the pressure. This makes it possible to have a two-stage or multi-stage compacting method. Owing to the fact that a later compacting is possible, a high accuracy in the stone height is achieved. This is possible as a result of the pressure pad influence, wherein the air pressure is lowered, for example, during the later compacting ,so that the pressure plate can hit against end stops. However, it is conceivable that this tool can operate with controlled pressure acting as the end stops. None of the applied references discloses such a mold.

In view of the foregoing remarks, it is respectfully submitted that Applicants' inventive mold for manufacturing concrete moldings is patentable over the art of record. Therefore, Applicants' respectfully request withdrawal of the rejections under 35 U.S.C. §§ 102 and 103(a), and respectfully submit that the application is in condition for allowance. An early and favorable reconsideration of the application is respectfully requested.

Should the Examiner believe that a conference would advance the prosecution of this application, he is encouraged to telephone the undersigned counsel to arrange such a conference.

Respectfully submitted,



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